

## **REMARKS/ARGUMENTS**

### **1. Remarks regarding the amendments**

Claim 1 was amended to clarify that all of the dienophile groups are available for Diels Alder reaction with a diene ring on an identical molecule. Of course only one dienophile can react with each such diene ring. Claim 6 was amended (a) to remove multiple dependency from the claim, (b) to clarify that the curable component may be a monomer, oligomer or combination thereof (support found for example at page 7, lines 4-5), (c) removing reference to the optional pore forming material. Similarly, claim 7 was amended to remove reference to the optional pore forming material. New Claims 9-11 are analogous to 6-8 but affirmatively recite the presence and removal of the pore forming material as stated therein. Support for these claims is found in original claims 6-8.

### **2. Rejection of claims 1 and 6 under 35 U.S.C. § 102(b)**

Claims 1 and 6 were rejected as anticipated by Mullen. Claim 1 recites a monomer that is capable of undergoing Diels Alder reaction with identical monomers. Specifically this monomer comprises at least three dienophile groups ("A- group") and one diene ring structure. The A group is specifically characterized in that the A group can react with the diene ring structure on an identical monomer.

The compounds of Mullen while having a diene ring structure and three or more acetylene groups are clearly distinct from the present invention. Specifically Mullen states in the second column that the ethynyl groups are inaccessible and cannot react therefore as dienophiles. Therefore, Claims 1 and 6 are novel over Mullen.

### **3. Rejection of Claims 1-8 under 35 U.S.C. § 103(a)**

(a) Claims 1-4 and 6-8 were rejected as obvious over Godschalx in view of Carter.

As noted above claim 1 is addressed to a monomer which comprises at least three dienophile groups (“A- group”) and one diene ring structure. Claim 4 requires that at least two of the ethynyl phenyl groups be attached to a single phenyl group.

Godschalx teaches monomers having a diene ring and two dienophile groups. A skilled worker reading Godschalx would not have been motivated to add a third dienophile group to the monomer. The Examiner asserts that such motivation would have been provided by Carter since Carter shows monomers having 4 ethynyl groups. However, Carter is technically distinct since it is addressed to monomers that inter-react by free radical polymerization – ethynyl group to ethynyl group. Thus, Carter’s teaching regarding use of four ethynyl groups on a monomer would not have led a skilled worker to modify Godschalx monomers which are taught as primarily reacting via Diels Alder reaction. Therefore, claims 1-8 are non-obvious over Godschalx in view of Carter.

New claims 9-11 are also clearly patentable over these specific references due to the additional presence of a pore forming material.

(b) Claim 5 was rejected as obvious over Mullen in view of Godschalx.

Claim 5 which depends from claim 1 recites specific monomers having at least three reactively available ethynyl groups and a diene ring structure. As previously noted Mullen does not teach such structures in that the ethynyl groups in Mullen are not reactively available. Godschalx does teach a structure having a diene ring and two reactively available ethynyl groups. However, nothing in Mullen and Godschalx would have led a skilled worker to add a third reactively available ethynyl group.

Therefore claim 5 is patentable over Mullen in view of Godschalx.

#### 4. Obviousness type double patenting

Claims 1-3 were rejected for obviousness type double patenting over claim 29 of Godschalx in view of Carter. Claim 29 of Godschalx recites two specific monomers having a cyclopentadienone ring structure with two pendant (phenylethynyl)phenyl groups. As noted above, while Carter has more than two pendant ethynyl groups, his monomer has a completely different reaction mechanism and would not have been considered relevant in any consideration of modification to Godschalx’s claim 29.

In view of the above discussion, Applicants request withdrawal of the rejections and allowance of all pending claims.

Respectfully submitted,

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